



IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP

Bill Northey, Secretary of Agriculture

IOWA MONTHLY WEATHER SUMMARY – JULY 2017

General Summary. Iowa temperatures averaged 74.8° or 1.2° above normal while precipitation totaled 3.12 inches or 1.38 inches less than normal. This ranks as the 45th warmest and 50th driest July among 145 years of data. A warmer July was last recorded in 2012 and a drier one in 2013.

Temperatures. The most noteworthy aspect of July's temperatures was the hot weather centered upon the third week of the month. Ottumwa Airport reached 101° on the 20th while the Des Moines Airport matched that reading the next day. Higher temperatures were last recorded in Iowa on September 9, 2013 when Donnellson and Keokuk reached 102°. Very high humidity also prevailed with the heat index exceeding 110° over parts of the state on the 19th, 20th and 21st. The heat index (what the air 'feels like' when humidity is factored in) peaked at 117° at the Clarinda Airport on the 20th and at the Harlan Airport on the 21st. However, a higher heat index was recorded just one year ago when Shenandoah Airport reached 119° on July 21, 2016. On the other end of the spectrum Sheldon was the only location to see temperatures fall below fifty degrees during the month with a 46° minimum on the morning of the 1st. Osceola recorded 19 days with a maximum temperature of ninety degrees or higher. Meanwhile a few locations in northeastern Iowa, where much wetter weather prevailed, never reached 90° during the month.

Cooling Degree Day Totals. Home air conditioning requirements, as estimated by cooling degree day totals, averaged 21% greater than last July and 15% more than normal. Thus far this season air conditioning requirements are running the same as this time last year and 14% greater than normal.

Precipitation. Rainfall was infrequent across most of the state during July. The exception was over parts of northeastern Iowa. Torrential rains fell over a small area centered upon southeast Clayton County on the night of July 11 with 6.35 inches falling at Garber and much higher amounts indicated by radar just to the south. A much larger area of very heavy rain occurred on the night of July 21 from Charles City southeastward toward Dubuque and then southward through the Quad Cities. Ionia in western Chickasaw County reported the most rain with 9.52 inches with this event. Several inches of rain fell during the morning of the 21st and was followed by intense rain that evening and overnight. 5.93 inches of rain was recorded in a two hour period starting at 10:45 p.m. at an automated gage two miles west of Ionia on the Little Cedar River. Thanks to these two major events, and several smaller ones, Guttenberg recorded 13.88 inches of rain for the month. This was a new record high for any calendar month among 87 years of records at that location (old record of 11.20 inches in July 2010). Fayette, with 12.78 inches of rain, registered their highest July total among 128 years of record (old record 11.60 in 2010). Meanwhile monthly rain totals were under one inch across large portions of northwest, central, south central and southeast Iowa. Lorimor reported the least rain during July with 0.24 inches. At the Ottumwa Airport their combined June and July rain total of 1.61 inches was the lowest for that two-month period since 1911.

Drought. Precipitation across most of Iowa was near seasonal norms through April although there were areas of south central and southeastern Iowa that entered 2017 with deficient soil moisture levels owing to a very dry growing season in that portion of the state in 2016. A much drier weather pattern began in late May over most of the southwest two-thirds of Iowa, with the dryness intensifying through the summer. The U.S. Drought Monitor, as of July 25, depicted a zone of moderate drought extending diagonally across Iowa from the northwest to south central and southeast portions of the state. Within this area severe drought was indicated over parts of south central Iowa. Iowa/USDA Agricultural Statistics Service survey of conditions on July 30 showed the state's soybean rating has been worse in late July only three times since 1993 (2006, 2012 and 2013) with only 2012 with a substantially lower rating than 2017.

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July 2017

WEATHER BY DISTRICTS

DISTRICT	TEMPERATURE (F)		COOLING DEGREE DAYS				PRECIPITATION (inches)			
	July 2017 Average	Departure*	July 2017 Average	Departure*	Since Jan., 1, 2017 Average	Departure*	July 2017 Average	Departure*	Since Jan.1, 2017 Average	Departure*
Northwest	74.4	+1.7	298	+52	528	+81	1.02	-2.83	15.66	-3.05
North Central	72.6	+0.6	243	+17	446	+40	3.42	-1.22	22.15	+0.62
Northeast	72.2	0.0	231	-1	436	+23	7.44	+2.77	28.05	+6.11
West Central	75.5	+1.6	334	+55	595	+87	2.46	-1.80	18.48	-2.31
Central	75.1	+1.6	319	+50	579	+91	2.05	-2.65	19.50	-2.99
East Central	73.8	0.0	281	+4	539	+23	5.72	+1.36	24.55	-2.74
Southwest	76.6	+1.4	368	+50	657	+76	2.47	-2.27	21.52	-1.11
South Central	77.3	+2.7	390	+88	662	+127	1.14	-3.84	18.57	-4.54
Southeast	76.9	+1.3	377	+48	684	+71	2.24	-2.23	17.03	-6.13
STATE	74.8	+1.2	313	+40	565	+69	3.12	-1.38	20.57	-1.13

* Departures are computed from 1981-2010 normals.

The weather data in this report are based upon information collected by the U. S. Dept. of Commerce, NOAA National Weather Service.

State Climatologist, Iowa Dept. of Agriculture & Land Stewardship
COUNTY PRECIPITATION ESTIMATES, JULY 2017 (inches)

